

IN THE SPECIFICATION:

Please replace paragraph 0015 with the following amended paragraph:

[0015] Another technique for depositing metals is sustained self-sputtering (SSS), as described by Fu et al. in U.S. Pat. No. 6,692,617 issued February 17, 2004 ~~Patent Application Serial No. 08/854,008, filed May 8, 1997~~ and by Fu in U.S. Pat. No. 6,183,614 B1 issued February 6, 2001. For example, at a sufficiently high plasma density adjacent a copper target, a sufficiently high density of copper ions develops that the copper ions will resputter the copper target with yield over unity. The supply of argon working gas can then be eliminated or at least reduced to a very low pressure while the copper plasma persists. Aluminum is believed to be not readily susceptible to SSS. Some other materials, such as Pd, Pt, Ag, and Au can also undergo SSS.

Please replace paragraph 0048 with the following amended paragraph:

[0048] The magnetic field generated by the coils 172 and 174 influences the magnetic field distributed by the rotating permanent magnets 210a, 210b of the magnetron 208. In the embodiment of FIG. 6, the resultant magnetic field has a null region 212 near the target 146 and a higher field strength in an area 214 near the wafer 148 and the pedestal 152. The changes in the field strength are represented by gradient lines 216 in the computer simulation of FIG. 6. It is believed that a resultant magnetic field as depicted in FIG. 6 tends to confine the CCP plasma generated by the RF energy supplied by the pedestal 152 to increase plasma bulk density adjacent the wafer 148. As a consequence, the ionization of the precursor gas may be increased to enhance the resputtering of the wafer 148. In addition, the resultant magnetic field is believed to influence the distribution of the ion flux to the wafer 148.

Please replace paragraph 0062 with the following amended paragraph:

[0062] To decrease the electron loss, the inner magnetic pole represented by the inner magnet 210b and magnetic pole face should have no significant apertures and be surrounded by a continuous outer magnetic pole represented by the outer magnets 210a 334 and pole face. Furthermore, to guide the ionized sputter particles to the wafer 148, the outer pole should produce a much higher magnetic flux than the inner pole. The extending magnetic field lines trap electrons and thus extend the plasma closer to the wafer 148. The ratio of magnetic fluxes should be at least 150% and preferably greater than 200%. Two embodiments of Fu's triangular magnetron have 25 outer magnets and 6 or 10 inner magnets of the same strength but opposite polarity.